## Maintenance Issue Types Only, Levee Inspection Report By Mile - Fall 2018

### **Reclamation District No. 1660 Tisdale**

Waterway	Bank	Unit Miles	Inspection Start/End	Inspector
Unit No. 01 Sacramento River	Left	2.94	11/01/2018 11/01/2018	Bob Duffey

		D (1) ++					
LM Start		Rating **	Α	Issue No.		14	
LM End		Issue Type +	Ma	Location *			
Category	Earthen L	evee		GPS La	atitude	/Longitude	
Category				Start		End	
Item		s & Maintenai	nce		0		0
пеш	Manuals				0		0
DWR ID	DWR ID DWR_RD1660_01_s _ 2013_14						
		Comn	nent Cod	de			
		Inspecto	or Comm	nent			
The LMA h	nas the O&	M manuals.					

No Photos

LM Start		Rating **	Α	Issue No.		15	
LM End		Issue Type +	Ma	Location *			
Category	Earthen L	evee		GPS La	atituc	le/Longitude	
Calegory				Start		End	
Item		y Supplies &			0		c
пеш	Equipmer	nt			0		c
DWR ID	DWR_RD1	660_01_s _ 201	3_15	'		'	
		Comn	nent Cod	de			

No Photos

Comment Code

Inspector Comment

The LMA has adequate emergency supplies and equipment.

LM Start		Rating **	Α	Issue No.		16	
LM End		Issue Type +	Ma	Location *			
Category	Earthen L	evee		GPS La	atituc	le/Longitude	
Category				Start		End	
Item	Flood Pre	paredness &	Training		0		0
пеш					0		0
DWR ID	DWR_RD1	660_01_s _ 201	3_16				
		Comn	nent Coc	le			
	Inspector Comment						
The LMA h	The LMA has completed flood fight training in 2016.						

No Photos

* Location	** Rating		+ Issue Type
LS : Land Side N/A : Not Applicable	A : Acceptable	N : Not Inspected/Rated	Ma : Maintenance Deficiancy
WS: Water Side	M : Minimally Acceptable	C : Corrected	Ob : Design & System Obsolescence
CR : Crown	U : Unacceptable	A/W : Acceptable but Monitor & Maintain	En: Enforcement

### Maintenance Issue Types Only, Levee Inspection Report By Mile - Fall 2018

### **Reclamation District No. 1660 Tisdale**

Waterway	Bank	Unit Miles	Inspection Start/End	Inspector
Unit No. 01 Sacramento River	Left	2.94	11/01/2018 11/01/2018	Bob Duffey

LM Start	0.14	Rating **	М	Issue No.		22
LM End	0.14	Issue Type +	Ма	Location *		
Category	Suppleme	ental		GPS Lat	itud	e/Longitude
Calegory				Start		End
Item	DWR UCI	P LMA Respo	nsibility	39.06132	2 °	39.061322°
пеш				-121.83799	3°	-121.837993 °
DWR ID	22489					·

#### Inspector Comment

Comment Code

FS\_ID:46670 DS\_ID:22489 EP\_NO: N/A

Repair Type: Non-Urgent Crossing Status: Found

UCIP Comments: - needs proper abandonment.- opening of landside

pipe almost burried.

FIELD\_STRUCT\_DESC: \*ABANDONED\* 24-inch corrugated metal gravity drainage pipe through the levee, 16.4 feet below the crown. Two corrugated metal cutoff walls. Slide gate in a concrete well at the waterside (WS) toe. (IV A-Winship). USACE bench mark on the top of the headwall at the landside (LS) toe. [Additional Reference(s): DWR Levee Log, 2005. USACE Sacramento O&M Manual 133, August 1955, (Station 2+07.8)].

FS Date: 10/10/2013

LM Start	0.14	Rating **	М	Issue No.	22 (cont)
LM End	0.14	Issue Type +	Ma	Location *	



WS view: concrete box on levee slope. No pipe found on berm and river bank.

#### Photo 2 of 3: UCIP\_FA\_2018\_46670\_38106.jpg



WS view: two slide gates in concrete box on levee slope.

### Maintenance Issue Types Only, Levee Inspection Report By Mile - Fall 2018

### **Reclamation District No. 1660 Tisdale**

Waterway	Bank	Unit Miles	Inspection Start/End	Inspector
Unit No. 01 Sacramento River	Left	2.94	11/01/2018 11/01/2018	Bob Duffey

LM Start	0.14	Rating **	М	Issue No.		22 (cont)
LM End	0.14	Issue Type +	Ма	Location *		
Category	Suppleme	ental		GPS Lat	itud	e/Longitude
Calegory				Start		End
Item	DWR UCI	P LMA Respo	nsibility	39.06132	2°	39.061322°
пеш				-121.83799	3°	-121.837993 °
DWR ID	22489					

#### Inspector Comment

Comment Code

FS\_ID:46670 DS\_ID:22489 EP\_NO: N/A

Repair Type: Non-Urgent Crossing Status: Found

UCIP Comments: - needs proper abandonment.- opening of landside

pipe almost burried.

FIELD\_STRUCT\_DESC: \*ABANDONED\* 24-inch corrugated metal gravity drainage pipe through the levee, 16.4 feet below the crown. Two corrugated metal cutoff walls. Slide gate in a concrete well at the waterside (WS) toe. (IV A-Winship). USACE bench mark on the top of the headwall at the landside (LS) toe. [Additional Reference(s): DWR Levee Log, 2005. USACE Sacramento O&M Manual 133, August 1955, (Station 2+07.8)].

FS Date: 10/10/2013



WS view: closer view of two slide gates in concrete box on levee slope.

LM Start	0.82	Rating **	Α	Issue No.		19
LM End	0.82	Issue Type +	Ма	Location *		LS
Category	Earthen L	evee	GPS Latitude/Longitude			
Calegory				Start		End
Item	Vegetatio	n		39.0515	65°	39.051565°
пеш			-121.8397	70°	-121.839770°	
DWR ID	WR ID DWR_RD1660_01_f _ 2018_19					

V1 : Control annual grass and weeds on the levee slopes and easements.

#### Inspector Comment

Comment Code

There was no vegetation on both slopes.

#### Photo 1 of 1: FA\_2018\_RD1660\_8\_19\_20181102\_00018.jpg



View of no vegetation on both slopes.

### Maintenance Issue Types Only, Levee Inspection Report By Mile - Fall 2018

### **Reclamation District No. 1660 Tisdale**

Waterway	Bank	Unit Miles	Inspection Start/End	Inspector
Unit No. 01 Sacramento River	Left	2.94	11/01/2018 11/01/2018	Bob Duffey

LM Start	1.33	Rating **	М	Issue No.		8		
LM End	1.36	Issue Type +	Ma	Location *		WS		
Catagony	Category				GPS Latitude/Longitude			
Calegory				Start		End		
Item		ACE Erosion S	Survey,	39.0443	61 °	39.043916°		
пеш	DRAFT			-121.8376	54°	-121.837305°		
DWR ID DWR_RD1660_01_f _ 2018_8								
	Comment Code							

#### Inspector Comment

2017 Site ID: SAC 120.6 L

Status: Eroding

2017 Field Notes: No observed change.

Site History: 2009 - Erosion on levee toe where an old cobble site is failing. 2011 - Some new minor erosion. 2012 - Site extended downstream, bank is being impacted from the weight of the trees. 2013 - Minor new erosion at the toe. 2015 - Minor new erosion at toe.



USACE 2013 Photo #1

LM Start	2.37	Rating **	М	Issue No.		2	
LM End	2.37	Issue Type +	Ma	Location *		LS	
Category Earthen Levee				GPS Latitude/Longitude			
Calegory				Start		End	
Item	Slope Sta	bility		39.0341	07°	39.034107°	
пеш				-121.8251	52°	-121.825152°	
DWR ID DWR_RD1660_01_s _ 2012_2							
	Comment Code						

S1 : Repair slope instability.

#### Inspector Comment





View of the toe cut by the farmer on the landside.

### Maintenance Issue Types Only, Levee Inspection Report By Mile - Fall 2018

## **Reclamation District No. 1660 Tisdale**

Waterway	Bank	Unit Miles	Inspection Start/End	Inspector
Unit No. 01 Sacramento River	Left	2.94	11/01/2018 11/01/2018	Bob Duffey

LM Start	2.38	Rating **	U	Issue No.		21		
LM End	2.38	Issue Type +	Ма	Location *	LS			
Category Earthen Levee				GPS Latitude/Longitude				
Calegory	ategory					End		
Item	Animal Co	ontrol	39.034032°		39.034032°			
item				-121.82512	20°	-121.825120 °		
DWR ID	DWR_RD1	660_01_f _ 201	8_21					
Comment Code								
A3 : No ro	dents visib	le, but rodent	burrows	visible; nee	d to	backfill and		

A3 : No rodents visible, but rodent burrows visible; need to backfill and compact or grout burrows.

Inspector Comment

Repair the rodent holes along the landside slope.



View of rodent holes along the landside slope.

LM Start	2.39	Rating **	М	Issue No.		4
LM End	2.39	Issue Type +	Ma	Location *	LS	
Category	Earthen L	evee	GPS Latitude/Longitude			
Calegory	zategory		Start		End	
Item	Slope Sta	bility		39.0338	58°	39.033858°
пеш			-121.8249	85 °	-121.824985 °	
DWR ID	DWR_RD1	660_01_f _ 201	8_4			

Comment Code

S1: Repair slope instability.

Inspector Comment

No Photos

LM Start	2.57	Rating **	М	Issue No.		20	
LM End	2.57	Issue Type +	Ma	Location *		LS	
Category	Earthen L	evee		GPS La	atitud	e/Longitude	
Calegory				Start		End	
Item	Animal Co	ontrol		39.0316	25°	39.031625	0
пеш				-121.8234	92°	-121.823492	0
DWR ID	DWR RD1	660 01 s 201	8 20				

Comment Code

A3 : No rodents visible, but rodent burrows visible; need to backfill and compact or grout burrows.

Inspector Comment

Repair the rodent holes along the landside slope.



View of the rodent holes along the landside slope.

\* Location

LS: Land Side N/A: Not Applicable WS: Water Side CR: Crown

\*\* Rating

A: Acceptable N: Not Inspected/Rated M: Minimally Acceptable C: Corrected Ob: Design & System Obsolescence

U: Unacceptable AW: Acceptable but Monitor & Maintain En: Enforcement

### Maintenance Issue Types Only, Levee Inspection Report By Mile - Fall 2018

### **Reclamation District No. 1660 Tisdale**

Waterway	Bank	Unit Miles	Inspection Start/End	Inspector
Unit No. 01 Sacramento River	Left	2.94	11/01/2018 11/01/2018	Bob Duffey

LM Start	2.63	Rating **	M	Issue No.		5		
LM End	2.66	Issue Type +	Ма	Location *		LS		
Category	evee	GPS La	atitud	e/Longitude				
Category				Start		End		
Item	Slope Sta	bility		39.0308	91°	39.030436°		
пеш				-121.822956 ° -121.82261				
DWR ID	DWR ID DWR_RD1660_01_s _ 2012_5							
		Comn	nent Cod	de				
S1 : Repai	r slope ins	tability.						
		Inspecto	or Comm	nent				

No Photos

### Maintenance Issue Types Only, Levee Inspection Report By Mile - Fall 2018

### **Reclamation District No. 1660 Tisdale**

Waterway	Bank	Unit Miles	Inspection Start/End	Inspector
Unit No. 02 Sutter Bypass	Right	9.10	11/01/2018 11/01/2018	Bob Duffey

LM Start	0.00	Rating **	М	Issue No.	6		
LM End	0.00	Issue Type +	Ма	Location *		LS	
Category	evee	GPS La	atitud	e/Longitude			
Calegory				Start		End	
Item	Slope Sta	bility		39.0329	10°	39.032910°	
пеш				-121.7436	65 °	-121.743665 °	
DWR ID DWR_RD1660_02_f _ 2016_6							
		Comn	nent Cod	de			
S1 : Repai	r slope ins	tability.					
		Inspecto	or Comn	nent			

LM Start	0.00	Rating **	М	Issue No.	6 (cont)
LM End	0.00	Issue Type +	Ма	Location *	LS



View of the slope instability looking from the landside toe.

Photo 2 of 2: FA\_2018\_RD1660\_9\_6\_20180905\_00002.jpg



Another view of the slope instability looking from the levee crown.

### Maintenance Issue Types Only, Levee Inspection Report By Mile - Fall 2018

### **Reclamation District No. 1660 Tisdale**

Waterway	Bank	Unit Miles	Inspection Start/End	Inspector
Unit No. 02 Sutter Bypass	Right	9.10	11/01/2018 11/01/2018	Bob Duffey

LM Start	0.02	Rating **	A/W	Issue No.		24	
LM End	0.02	Issue Type +	Ма	Location *			
Category	Suppleme	upplemental			GPS Latitude/Longitude		
Calegory			Start		End		
Item	DWR UCI	P LMA Respo	nsibility	39.0332 <sup>-</sup>	14°	39.033214°	
пеш				-121.7435	41 °	-121.743541°	
DWR ID	22495						

#### Inspector Comment

Comment Code

FS\_ID:22663 DS\_ID:22495 EP\_NO: 10020

Repair Type: No Action Needed Crossing Status: Found

UCIP Comments: - pipe/opening not visible as it was submerged into water on both sides.- it seems that 36-inch concrete pipe through the levee. It needs confirmation from LMA/DWR Inspector.- USED bench mark on landside concrete vault.

FIELD\_STRUCT\_DESC: [Reclamation District No. 1660 (RD1660) Drainage Pump] 48-inch by 84-inch reinforced concrete outfall structure through the levee, 34 feet below the crown. Slide gate in a 4-foot by 8-foot concrete riser on the waterside (WS) slope. (Retention of a 4-foot by 7-foot concrete culvert outfall drain through the levee, 34 feet below the crown, and a slide gate in a concrete well authorized under Automatic Board Order (ABO) issued as Permit No. 10020, 1974 - Leo Bandoni, care of John Digardi). [Additional Reference(s): DWR Levee Log, 2005. USACE Sacramento O&M Manual 133, August 1955, (Station 1044+60), two 4-foot by 7-foot concrete tunnels referenced]. FS Date: 10/10/2013

LM Start	0.02	Rating **	A/W	Issue No.	24 (cont)
LM End	0.02	Issue Type +	Ма	Location *	



WS view: 4 ft. by 8 ft. concrete box with slide gate on levee slope. USED bench mark on top of the box.

#### Photo 2 of 3: UCIP\_FA\_2018\_22663\_38247.jpg



WS view: inside view of concrete box on levee slope. Slide gate in concrete box.

### Maintenance Issue Types Only, Levee Inspection Report By Mile - Fall 2018

### Reclamation District No. 1660 Tisdale

Waterway	Bank	Unit Miles	Inspection Start/End	Inspector
Unit No. 02 Sutter Bypass	Right	9.10	11/01/2018 11/01/2018	Bob Duffey

LM Start	0.02	Rating **	A/W	Issue No.		24 (cont)
LM End	0.02	Issue Type +	Ма	Location *		
Category	Suppleme	ental		GPS La	titud	e/Longitude
Calegory						End
Item	DWR UCI	P LMA Respo	nsibility	39.03321	14°	39.033214°
пеш				-121.74354	11 °	-121.743541 °
DWR ID	22495					

# Inspector Comment

Comment Code

FS\_ID:22663 DS\_ID:22495 EP\_NO: 10020

Repair Type: No Action Needed Crossing Status: Found

UCIP Comments: - pipe/opening not visible as it was submerged into water on both sides.- it seems that 36-inch concrete pipe through the levee. It needs confirmation from LMA/DWR Inspector.- USED bench mark on landside concrete vault.

FIELD\_STRUCT\_DESC: [Reclamation District No. 1660 (RD1660) Drainage Pump] 48-inch by 84-inch reinforced concrete outfall structure through the levee, 34 feet below the crown. Slide gate in a 4-foot by 8-foot concrete riser on the waterside (WS) slope. (Retention of a 4-foot by 7-foot concrete culvert outfall drain through the levee, 34 feet below the crown, and a slide gate in a concrete well authorized under Automatic Board Order (ABO) issued as Permit No. 10020, 1974 - Leo Bandoni, care of John Digardi). [Additional Reference(s): DWR Levee Log, 2005. USACE Sacramento O&M Manual 133, August 1955, (Station 1044+60), two 4-foot by 7-foot concrete tunnels referenced]. FS Date: 10/10/2013



WS view: closer view of U shaped concrete headwall in bypass channel. Pipe not visible.

LM Start	1.43	Rating ** M Iss		Issue No.	23		
LM End	1.43	Issue Type +	Ma	Location *		LS	
Category	Earthen L	GPS Latitude/Longitude					
Calegory			Start		End		
Item	Animal Co	ontrol		39.0526	87°	39.052687°	
пеш			-121.7517	20°	-121.751720°		
DWR ID	DWR ID DWR_RD1660_02_f _ 2017_23						

### Comment Code

A3 : No rodents visible, but rodent burrows visible; need to backfill and compact or grout burrows.

#### Inspector Comment

Repair the rodent holes on the landside slope.

### Photo 1 of 1: FA\_2018\_RD1660\_9\_23\_20180905\_00007.jpg



View of the rodent holes along the landside slope.

\* Location
LS: Land Side N/A: Not Applicable
WS: Water Side
CR: Crown

\*\* Rating

A: Acceptable N: Not Inspected/Rated
N: Not Inspected/Rated
C: Corrected
M: Minimally Acceptable
C: Corrected
M: Minimally Acceptable
U: Unacceptable
AW: Acceptable but Monitor & Maintain

\*\* Rating
A: Issue Type
Ma: Maintenance Deficiancy
Ob: Design & System Obsolescence
En: Enforcement

### Maintenance Issue Types Only, Levee Inspection Report By Mile - Fall 2018

### **Reclamation District No. 1660 Tisdale**

Waterway	Bank	Unit Miles	Inspection Start/End	Inspector
Unit No. 02 Sutter Bypass	Right	9.10	11/01/2018 11/01/2018	Bob Duffey

LM Start	5.73	Rating **	Α	Issue No.		8	
LM End	5.73	Issue Type +	Ма	Location *		LS	
Category Earthen Levee				GPS La	atitud	e/Longitude	
Calegory				Start		End	
Item	Vegetatio	n		39.1087	'97 °	39.108797°	
пеш	-121.783333° -121.7833						
DWR ID DWR_RD1660_02_f _ 2018_8							
		Comn	nent Cod	de			
V1 : Contre easements		rass and wee	eds on th	e levee slo	pes a	and	
		Inspecto	or Comm	nent			
There was	no vegeta	tion on both s	lopes.				



View of no vegetation on both slopes.

LM Start	6.51	Rating **	С	Issue No.		7	
LM End	6.51	Issue Type +	Ma	Location *		WS	
Category Earthen Levee				GPS Latitude/Longitude			
Category			Start		End		
Item	Encroach	Encroachments			98°	39.115398°	
пеш				-121.7952	65 °	-121.795265°	
DWR ID	DWR_RD1	8_7					
Comment Code							

TR: Tree or limb

Inspector Comment

The tree was removed from the waterside toe.

No Photos

### Maintenance Issue Types Only, Levee Inspection Report By Mile - Fall 2018

### **Reclamation District No. 1660 Tisdale**

Waterway	Bank	Unit Miles	Inspection Start/End	Inspector
Unit No. 02 Sutter Bypass	Right	9.10	11/01/2018 11/01/2018	Bob Duffey

LM Start	9.07	Rating **	A/W	Issue No.		26	
LM End	9.07	Issue Type +	Ма	Location *			
Category	Suppleme	upplemental			GPS Latitude/Longitude		
Calegory			Start		End		
Item	DWR UCI	P LMA Respo	nsibility	39.13686	1°	39.136861	0
пеш				-121.83397	4°	-121.833974	0
DWR ID	22505						

#### Inspector Comment

Comment Code

FS\_ID:22708 DS\_ID:22505 EP\_NO: N/A

Repair Type: No Action Needed Crossing Status: Found

UCIP Comments: - inlet structure 160 ft off the levee center on landside

drainage ditch

FIELD\_STRUCT\_DESC: 48-inch steel gravity drainage pipe through the levee, 29 feet below the crown. Slide gate and concrete bulkhead on the riverbank. Staff gage on the waterside (WS) berm. (Retention of a 48-inch corrugated metal pipe (CMP) through the levee, 29 feet below the crown, a slide gate, and a concrete bulkhead authorized under Automatic Board Order (ABO) No. 10021, 1974 - Butte Slough Irrigation Company, care of Tarke Warehouse). [Additional Reference(s): DWR Levee Log, 2005. USACE Sacramento O&M Manual 133, August 1955, (Station 433+43), 48-inch CMP referenced].

FS Date: 10/15/2013

LM Start	9.07	Rating **	A/W	Issue No.	26 (cont)
LM End	9.07	Issue Type +	Ма	Location *	



WS view: overview of concrete box on channel bank. It looks like a fish ladder. Pipe discharges into this box.

Photo 2 of 3: UCIP\_FA\_2018\_22708\_38405.jpg



WS view: concrete box on channel bank. Pipe end with slide gate. Pipe discharges into this box.

N : Not Inspected/Rated C : Corrected A/W : Acceptable but Monitor & Maintain + Issue Type Ma : Maintenance Deficiancy

Ob : Design & System Obsolescence En: Enforcement

Page 6 of 6

#### **Flood Control Project Maintenance** Levee Inspections

### Maintenance Issue Types Only, Levee Inspection Report By Mile - Fall 2018

### **Reclamation District No. 1660 Tisdale**

Waterway	Bank	Unit Miles	Inspection Start/End	Inspector
Unit No. 02 Sutter Bypass	Right	9.10	11/01/2018 11/01/2018	Bob Duffey

LM Start	9.07	Rating **	A/W	Issue No.		26 (cont)	
LM End	9.07	Issue Type +	Ма	Location *			
Category	Supplemental			GPS Latitude/Longitude			
				Start		End	
Item	DWR UCIP LMA Responsibility			39.13686°	°	39.136861	0
				-121.833974	۱°	-121.833974	٥
DWR ID	22505						

#### Inspector Comment

Comment Code

FS\_ID:22708 DS\_ID:22505 EP\_NO: N/A

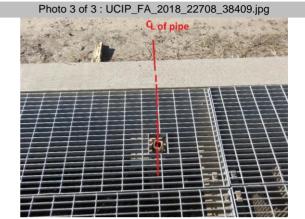
Repair Type: No Action Needed Crossing Status: Found

UCIP Comments: - inlet structure 160 ft off the levee center on landside

drainage ditch

FIELD\_STRUCT\_DESC: 48-inch steel gravity drainage pipe through the levee, 29 feet below the crown. Slide gate and concrete bulkhead on the riverbank. Staff gage on the waterside (WS) berm. (Retention of a 48-inch corrugated metal pipe (CMP) through the levee, 29 feet below the crown, a slide gate, and a concrete bulkhead authorized under Automatic Board Order (ABO) No. 10021, 1974 - Butte Slough Irrigation Company, care of Tarke Warehouse). [Additional Reference(s): DWR Levee Log, 2005. USACE Sacramento O&M Manual 133, August 1955, (Station 433+43), 48-inch CMP referenced].

FS Date: 10/15/2013



WS view: concrete box on channel bank. Pipe discharges into this box. A slide gate inside this box.